5 Controller setup

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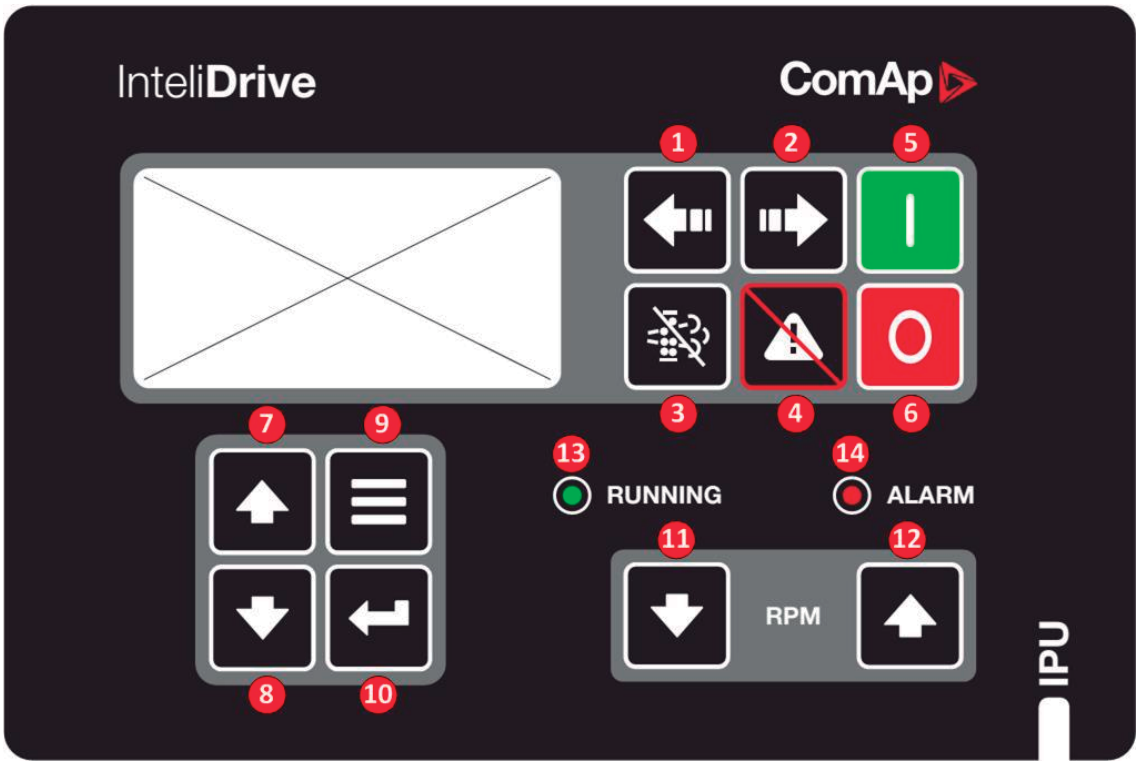
5.1 Front panel elements



Position	Button	Description
1		**MODE LEFT** button. Use this button to change the mode. The button works only if the main screen with the indicator of currently selected mode is displayed. ***Note:*** *This button will not work if the controller mode is forced by one of binary inputs Remote OFF, Remote MAN, Remote AUT.*
2		**MODE RIGHT** button. Use this button to change the mode. The button works only if the main screen with the indicator of currently selected mode is displayed. ***Note:*** *This button will not work if the controller mode is forced by one of binary inputs Remote OFF, Remote MAN, Remote AUT.*
3		**TIER 4** button. Use this button for fast access to after treatment setpoints.
4		**FAULT RESET** button. Use this button to acknowledge alarms and deactivate the horn output. Inactive alarms will disappear immediately and status of active alarms will be changed to "confirmed" so they will disappear as soon as their reasons dismiss.
5		**START** button. Works in MAN mode only. Press this button to initiate the start sequence of the engine.
6		**STOP** button. Works in MAN mode only. Press this button to initiate the stop sequence of the engine. Repeated pressing or holding the button for more than 2 s will cancel current phase of stop sequence (e. g. cooling) and next phase will continue.
7		**SPEED DOWN** button. Works in MAN mode only. Use this button for decreasing speed request to the engine. Short pressing changes the speed by 5 RPM/s during 0,6 s,after this period the speed change is according to setpoint Engine Params / Speed Ramp.
8		**SPEED UP** button. Works in MAN mode only. Use this button for increasing speed request to the engine. Short pressing changes the speed by 5 RPM/s during 0,6 s,after this period the speed change is according to setpoint Engine Params / Speed Ramp.
9		**PAGE** button. Use this button to switch over display pages. See Display Screens and Pages Structure chapter below this table for more details.
10		**UP** button. Use this button to move upÂ or increase value of selected setpoint.

Position	Button	Description
11		**DOWN** button. Use this button to move down or decrease value of selected setpoint.
12		**ENTER** button. Use this button to finish editing a setpoint or moving right in the history page.
13		**RUNNING LED**
14		**ALARM LED**

5.2 Init screens

5.2.1 Init screen

This is a first screen after controller's start which is dedicated for information provided by customers such as contact numbers, service technician contact and customer message for end users of engine. Configuration of this screen is only done by LiteEdit PC tool.

Note: *Init (welcome) screen appears immediately after power on with ComAp default text. It is possible to modify it using LiteEdit – Configuration – Init button. There is space for 8 text lines per 21 ASCII characters each.*

5.2.2 Firmware screen

This screen contains information about controller's type, controller manufacturer ComAp, uploaded firmware, version of firmware, used application and branch. There is also information about currently configured electronic engine unit, respectively about ESF file. Details for recognition of configured electronic engine are in chapter ECU controlled engine support.

Note: *To see firmware information use panel buttons: hold ENTER and press PAGE. This procedure activates the panel LEDs test as well. The screen disappears itself after app 5 seconds.*

5.2.3 Languages screen

InteliDrive IPU controller offers configurable language support. On this screen is possible to switch between languages configured in controller. Second way, how to change language, is by binary input Lang Selection.

Note: *To switch to Language screen use panel buttons: hold ENTER and press PAGE twice. Press ENTER to leave this screen.*

5.2.4 User interface screen

InteliDrive IPU controller enables to choose the user interface as customer prefers.

There are two choices available: USER or ENGINEER interface

USER interface is simple menu displaying just measurement, alarm and init screens.

ENGINEER interface allow changing the controller's settings, reviewing the history, measurements and alarms. This mode is default.

This screen also contains Serial and Pwd. dec. (Password decode) numbers These numbers you can use in case of forgotten passwords.

The last line on this screen signalize DiagData number. This number is giving specific diagnostics information in case the program is from some internal reason blocked.

Note: *If the password for the controller is forgotten, then is necessary to send Serial and Pwd. dec. numbers to technical support team. They are able to renewed password for your controller.*

Note: *To switch to User interface screen use panel buttons: hold ENTER and press PAGE three times. Press ENTER to leave this screen.*

5.3 Display menus

There are 3 display menus available: MEASUREMENT, ADJUSTMENT and HISTORY in Engineer interface and only MEASUREMENT in User interface.

Each menu consists of several screens. Press repeatedly button to select requested menu.

5.3.1 Switching between User and Engineer menus

Hold and then press to activate info Firmware screen and the panel LED test. Within 5s press to switch to Language selection screen and the second time to switch to User interface selection. Use and to select appropriate interface and press

5.4 How to select the engine mode?

Use or to select requested engine operation mode (OFF – MAN – AUT)

5.5 How to view measured data?

1. Use repeatedly button to select the MEASUREMENT menu.
2. Use and to select the screen with requested data.

5.6 How to view and edit setpoints?

1. Use repeatedly button to select the ADJUSTMENT menu.
2. Use or to select requested set points group.
3. Press to confirm.
4. Use or to select requested set point.
5. Set points marked "*" are password protected.
6. Press to edit.

7. Use or to modify the set point. When or is pressed for 2 sec, auto repeat function is activated.
8. Press to confirm or to leave without change.
9. Press to leave selected set points group.

5.6.1 How to change the display contrast?

Press and or at the same time to adjust the best display contrast

5.6.2 How to check software revision?

Hold and then press . This activates the panel LED test and controller's display is switched to Firmware screen. On the display you can see (for 10 seconds) InteliDrive Lite Firmware screen containing:

1. Controller name (see **Group: Basic settings (page 117)**)
2. Firmware version ID-FLX-Lite-x.x
3. ESF: version of ESF file, if ECU is configured
4. SW version: the first is the firmware version number the second is configuration table number
5. Application: DCU
6. Branch: DCU

Note: *Only in MEASUREMENT screen.*

5.6.3 How to check serial number and choose interface?

Hold and then three times press . On the display you can see InteliDrive IPU User Interface screen containing:

1. User interface: can choose User (block adjustment function of controller) or Engineer interface
2. Serial: 8 character number
3. Pwd. dec: 10 character number
4. DiagData: 1 character number

Note: *Only in MEASUREMENT screen.*

5.6.4 How to change language?

Hold and then two times press to get to Languages selection screen. Use or to select desired langue and press to confirm selection.

5.7 How to find active alarms?

Active alarm list is the last screen in the MEASUREMENT menu.

Select MEASUREMENT menu. Press you will see the list of all active alarms with the number of alarms at the top-right corner three state alarms are introduced:

Example	Description
*Wrn Water temp	Active not accepted alarm
Wrn water temp	Active accepted alarm
*Wrn Water temp	Inactive not accepted alarm
	Inactive accepted alarm

Press  accepts all alarms. Non-active alarms immediately disappear from the list.

Active alarm list appears on the screen when a new alarm comes up and Main MEASUREMENT screen is active.

Note: *Alarm list does not activate when you are reviewing the values or setpoints.*

The second alarm list for ECU alarms is also available. It is displayed one screen above the standard alarm list on the controller display or under the standard alarm list in Control window of LiteEdit. If an alarm appears in this alarm list, it is signalized in the standard alarm list and by exclamation mark on the main measure screen.

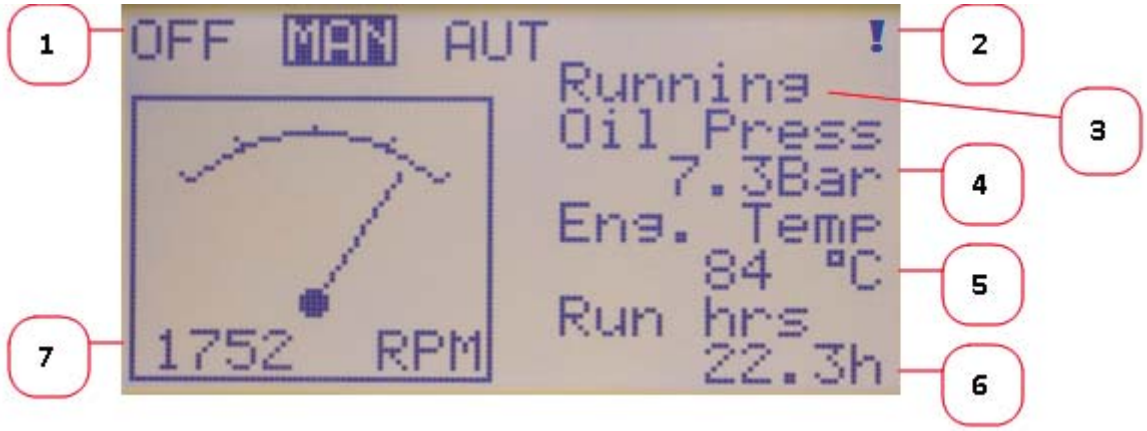
Control from the front panel	
	One screen up/down
	Cursor move within the ECU alarm list
	ECU fault code reset

5.8 How to list History records?

1. Use repeatedly  button to select the History menu.
2. Use  or  to select requested History line – see Reason, Date and Time.
3. Press  to go-on line to right – see recorded values.
4. Use repeatedly  button to go back to Measurement screen.

5.9 MEASUREMENT screens description

5.9.1 Main measure screen



1	Operation mode of the engine
2	Indication: “**L**” = Access lock, "**!**” = active Alarm
3	Status of the engine
4	AIN1 - Oil Pressure
5	AIN2 (Engine Temperature) / Soot Level
6	Run Hrs / DEFLevel
7	Engine RPM

5.9.2 InteliDrive Lite Analog inputs screens

- First screen:
  - Operation mode of engine
  - Oil pressure (AI1 bargraph with protection limits indication)
  - Water temperature (AI2 bargraph with protection limits indication) or SootLevel indicator
  - Run Hrs or DEFLevel
- Second screen (Analog and binary input/Output values) :
  - AIN3 (Fuel level, displayed only if is configured)
  - AIN4 (Pump suction, displayed only if is configured)
  - AIN5 (Pupm discharge, displayed only if is configured)
  - AIN6 (Pump flow, displayed only if configured)
- Third screen: (Engine values)

5.9.3 IL-NT-AIO Analog inputs screens

- AI1 (AI1 bargraph with protection limits indication, displayed only if is configured)
- AI2 (AI2 bargraph with protection limits indication, displayed only if is configured)

- AI3 (AI3 bargraph with protection limits indication, displayed only if is configured)
- AI4 (AI4 bargraph with protection limits indication, displayed only if is configured)

Note: *This screen is shown/hidden depending on whether the IL-NT-AIO is configured or not. Analog output AO1 is not displayed on any screen!*

5.9.4 IL-NT-BIO8 Binary inputs screen

- IN: BIO8 BI1 Alarm
- IN: BIO8 BI2 Alarm
- IN: BIO8 BI3 Alarm
- IN: BIO8 BI4 Alarm
- IN: BIO8 BI5 Alarm
- IN: BIO8 BI6 Alarm
- IN: BIO8 BI7 Alarm
- IN: BIO8 BI8 Alarm
  - line is displayed on the following screen

Note: *These screens are shown/hidden depending on whether the IL-NT-BIO8 is configured or not.*

5.9.5 IL-NT-IO1 Binary inputs screen

- IN: BIO8 BI1 Alarm
- IN: BIO8 BI2 Alarm
- IN: BIO8 BI3 Alarm
- IN: BIO8 BI4 Alarm

Note: *This screen is shown/hidden depending on whether the IL-NT-IO1 is configured or not. Analog outputs are not displayed on any screen!*

5.9.6 ECU State

- ECU State
- ECU YellowLamp
- ECU RedLamp
- WaitToStart
- SpeedReq Abs
  - Required RPM of the engine
- SpeedReq Rel
  - %

Note: *This screen is shown/hidden depending on whether the ECU is configured or not.*

5.9.7 ECU Values

It depends on the ESF file which is configured. See practical example of the screen below for Caterpillar J1939 2.1.

Practical example:

- Fuel rate
  - L/h or gph
- CoolantTemp
  - °C or °F
- IntakeTemp
  - °C or °F
- Oil pressure
  - Bar or psi
- Boost pressure
  - Bar or psi
- Load
  - % (Percentual load at current speed)

Note: *This screen is shown/hidden depending on whether the ECU is configured or not.*

5.9.8 Statistic

- Number of starts
- E-Stop
  - Number of engine Emergency stops (without ShutDowns)
- ShutDown
  - Number of engine ShutDown stops (without Emergency stops)
- SpeedReq Abs
  - Required RPM of the engine
- LoadLimitAout
  - Output of Load limit loop – see **Group: Load limit (page 153)**
- RPM-BI3
  - RPM detected and counted on the BI3 input

Note: *Running time is displayed on the Main screen of measurements and is measured in complete minutes, displayed in complete hours. Values are stored in nonvolatile memory.*

5.9.9 ECU AlarmList

Diagnostic messages are read from ECU and displayed in this second alarm list. For Standard J1939 engines SPN (Suspect Parameter Number), FMI (Failure Mode Identifier) and OC (Occurrence Counter) are shown together with verbal description if available.

Following image shows displaying of ECU alarms in the second alarm list. The additional information for the row selected by cursor is on the last row (SPN, OC and FMI codes).

If the verbal description of alarm is not available, the SPN (decimal and hexadecimal) is displayed.

EngOilPress WRN
BoostPressFLS
EngOilTem FLS
629(275h) FLS
Controller#1
EngCoolTemp WRN

SPN:110 OC:7 FMI:3

Note: *For FMI = 0 and 1, WRN is displayed. For other FMI codes, FLS is displayed.*

5.9.10 Alarm list

Alarm list displays active or inactive alarms occurred on controller. Controller automatically switches to the Alarm list screen when any new Alarm appears, but from Main measure screen only. See chapter **Alarm management (page 82)**

5.10 Display screens and pages structure

Measurement screens:

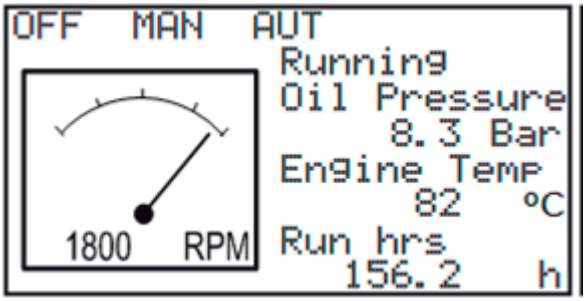


Image 5.1 Main values

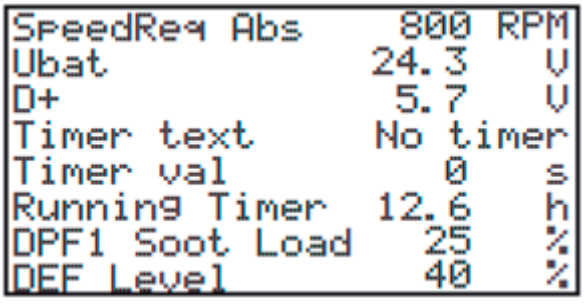


Image 5.2 Engine values

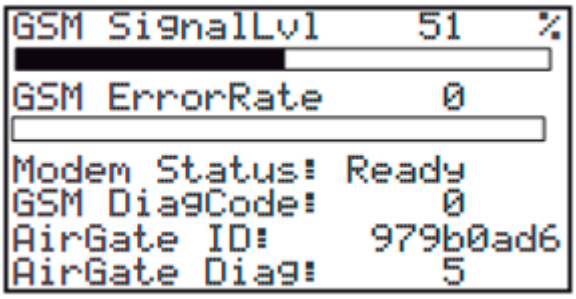


Image 5.3 Remote communication values

Note: *Displayed only if remote comm. Module is used*

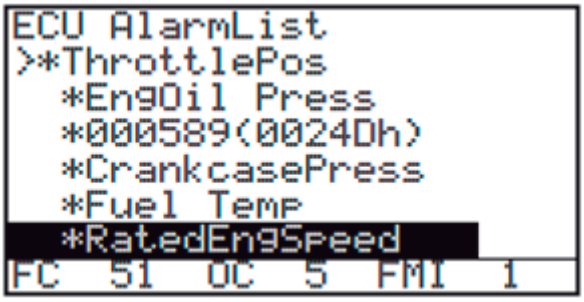


Image 5.4 ECU alarm list

Note: *Displayed only if ECU is configured*

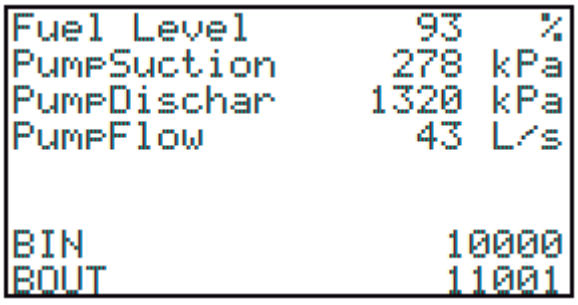


Image 5.5 Analog and binary inputs / outputs values

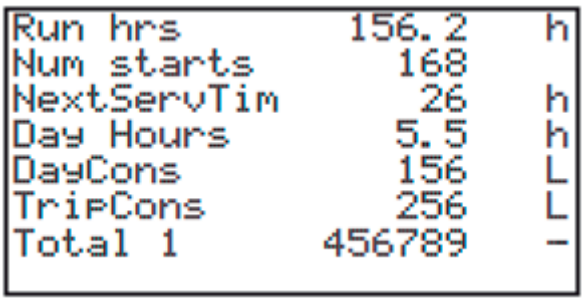


Image 5.6 Statistics

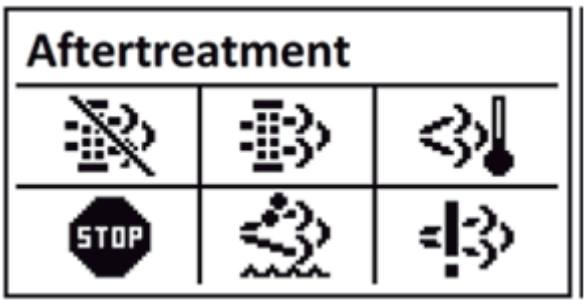


Image 5.7 Aftertreatment

Note: *Displayed only if Tier 4 engine is connected*

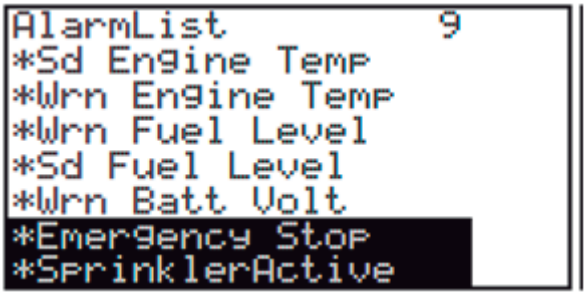


Image 5.8 Alarm list

Setpoints screen:

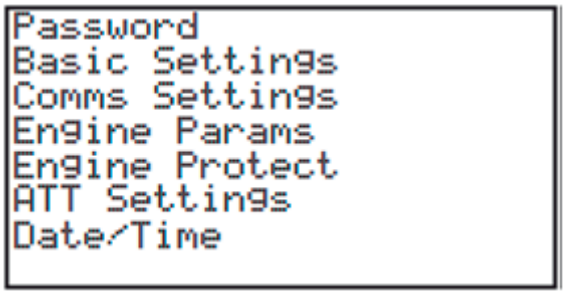


Image 5.9 Setpoint groups

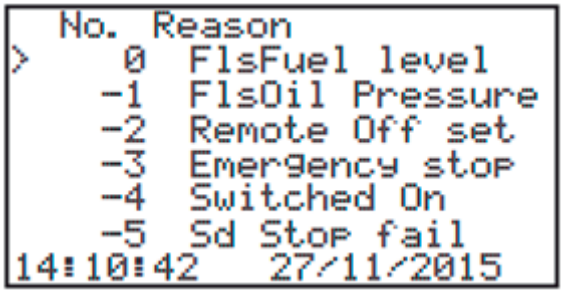


Image 5.10 History log

All values and parameters are available from PC tools LiteEdit and InteliMonitor.

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